Use of *Cryptococcus albidus* in decay protection and storage ability of organic strawberries fruits in Poland

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Abstract: The registration and commercialization of biological fungicides for postharvest is during development. Biological control of postharvest diseases has become a potentially effective and commercially viable technology. The used in our experiments the product YieldPlus[®] is registered only in South Africa. No postharvest biocontrol products are registered in Europe, at present. The yeast Cryptococcus albidus included into this commercial product was used during the season of growing strawberries in organic system under the field conditions. One millilitre of suspension contained 1 x 10^6 cells of yeast. During the growing season were made three applications of product. The foliar spraying was made at the beginning of blooming; next one was performed during full blooming (one week after the first) and the last treatment before harvest. For treated and untreated plants were performed four replicates, in each one was included 80 plants. In this paper will be presented results of recorded fresh fruits towards their ability to storage. The sampled fruits were collected from treated and untreated fields. At the end of the storage period (21 days, at 4°C and 98% RH), C. albidus reduced the incidence of gray and blue mold of treated fruits compared to the watertreated control. Any wounds and symptoms of decay disqualified fruits. In the second experiment was assessed the ability of fresh fruits to storage after their dipping in three different suspensions of C. albidus. The suspensions of C. albidus were adjusted to concentrations of 1×10^6 ; 1×10^3 and 1×10^6 ; 1×10^3 and 1×10^6 ; 1×10^6 ; 1×10^3 and 1×10^6 ; 1×10^6 ; 1 10^2 cells/ml with distilled water. Obtained results are very promising.

Key words: organic production, strawberries fruits, Cryptococcus albidus, storage ability, biocontrol